MINOR SOURCE OPERATING PERMIT (MSOP)
OFFICE OF AIR QUALITY

Crown Equipment Corporation
2600 East State Road 240
Greencastle, Indiana 46135

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Operation Permit No.: MSOP 133-14606-00031	
Issued by: Original signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: March 4, 2002

TABLE OF CONTENTS

D.2 EMISSIONS UNIT OPERATION CONDITIONS - Shot Blasting Operations

Emission Limitations and Standards

D.2.1 Particulate Matter (PM) [326 IAC 6-3-2(c)]

Compliance Determination Requirements

D.2.2 Particulate Matter (PM)

Annual Notification
Malfunction Report

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary truck parts manufacturing plant.

Authorized Individual:	Teresa Keck
Source Address:	2600 East State Road 240, Greencastle, Indiana 46135
Mailing Address:	2600 East State Road 240, P.O. Box 840, Greencastle, Indiana 46135
Phone Number:	765-653-4240
SIC Code:	3735
County Location:	Putnam
County Status:	Attainment for all criteria pollutants
Source Status:	Minor Source Operating Permit Minor Source, under PSD Rules;

A.2 Emissions units and Pollution Control Equipment Summary

This stationary source is approved to operate the following emissions units and pollution control devices:

(a) One (1) air atomizing paint spray booth, identified as SPPL, with a maximum capacity of spraying twenty-eight (28) small parts per hour, installed October 1996, using waterwash for particulate matter overspray control, and exhausting to stack S4;

(b) One (1) air atomizing paint spray booth, identified as LPPL, with a maximum capacity of spraying three (3) large parts per hour, installed October 1996, using waterwash for particulate matter overspray control, and exhausting to stacks S2 and S3;

(c) One (1) Pangborn shot blast machine with a blast rate of 1,600 pounds steel shot per hour, installed October 1996, equipped with a baghouse for particulate matter control, and exhausting to stack S9;

(d) One (1) natural gas fired phosphate washer rated at 1.5 million British thermal units per hour (MMBtu/hr) and exhausting to stacks S5 and S6;

(e) One (1) natural gas fired dry off oven rated 0.8 MMBtu/hr and exhausting to stack S7;

(f) One (1) natural gas fired cure oven rated at 2.5 MMBtu/hr and exhausting to stack S8;

(g) One (1) natural gas fired air make-up unit rated 3.89 MMBtu/hr and exhausting to stack S10

SECTION B GENERAL CONDITIONS

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

B.1 Permit No Defense [IC 13]

This permit to operate does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

B.2 Definitions

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2, and 326 IAC 2-1.1-1 shall prevail.

B.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

B.4 Modification to Permit [326 IAC 2]

All requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

B.5 Permit Term [326 IAC 2-6.1-7]

This permit is issued for a fixed term of five (5) years form the original date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date.

B.6 Annual Fee Payment [326 IAC 2-1.1-7]

The operation permit shall be subject to annual operating permit fees pursuant to 326 IAC 2-1.1-7(Fees).

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

C.1 PSD Minor Source Status [326 IAC 2-2] [40 CFR 52.21] [326 IAC 2-7]

(a) The total source potential to emit of any criteria pollutant is less than 250 tons per year. Therefore the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 will not apply.

(b) Any change or modification which may increase potential to emit to 250 tons per year from this source, shall cause this source to be considered a major source under PSD, 326 IAC 2-2 and 40 CFR 52.21, and shall require approval from IDEM, OAQ prior to making the change.

(c) Any change or modification which may increase potential to emit to 10 tons per year of any single hazardous air pollutant, twenty-five tons per year of any combination of hazardous air pollutants, or 100 tons per year of any other regulated pollutant from this source, shall cause this source to be considered a major source under Part 70 Permit Program, 326 IAC 2-7, and shall require approval from IDEM, OAQ prior to making the change.

C.2 Preventive Maintenance Plan [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) after issuance of this permit, including the following information on each emissions unit:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

(b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.

(c) PMP's shall be submitted to IDEM, OAQ, upon request and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

C.3 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

(a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1.

(c) The Permittee shall notify the OAQ within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

C.4 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under this title or the conditions of this permit or any operating permit revisions;

(c) Inspect, at reasonable times, any processes, emissions units (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit or any operating permit revisions;

(d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

C.5 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

Pursuant to [326 IAC 2-6.1-6(d)(3)] :

(a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAQ, Permits Branch, within thirty (30) days of the change.

(b) The written notification shall be sufficient to transfer the permit to the new owner by an notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).

(c) IDEM, OAQ, shall issue a revised permit.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

C.6 Permit Revocation [326 IAC 2-1-9]

Pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to operate may be revoked for any of the following causes:

(a) Violation of any conditions of this permit.

(b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.

(c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.

(d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.

(e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.7 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

C.8 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.9 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted by using good engineering practices (GEP) pursuant to 326 IAC 1-7-3.

Testing Requirements

C.10 Performance Testing [326 IAC 3-6][326 IAC 2-1.1-11]

(a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

(b) All test reports must be received by IDEM, OAQ within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

Compliance Monitoring Requirements

C.11 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.12 Monitoring Methods [326 IAC 3]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

C.13 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11]

(a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (±2%) of full scale reading.

(b) Whenever a condition in this permit requires the measurement of a temperature, flow rate, or pH level, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (±2%) of full scale reading.

(c) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

C.14 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 1-6]

(a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:

(1) This condition;

(2) The Compliance Determination Requirements in Section D of this permit;

(3) The Compliance Monitoring Requirements in Section D of this permit;

(4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and

(5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAQ upon request and shall be subject to review and approval by IDEM, OAQ. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of :

(A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and

(B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.

(b) For each compliance monitoring condition of this permit, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the permit unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.

(c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:

(1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.

(2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied or;

(3) An automatic measurement was taken when the process was not operating; or

(4) The process has already returned to operating within "normal" parameters and no response steps are required.

(d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken.

Record Keeping and Reporting Requirements

C.15 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

(a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.

(b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.

(c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).

(d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.16 Monitoring Data Availability [326 IAC 2-6.1-2] [IC 13-14-1-13]

(a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.

(b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.

(c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.

(d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.

(e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.

(f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.17 General Record Keeping Requirements [326 IAC 2-6.1-2]

(a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAQ representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Records of required monitoring information shall include, where applicable:

(1) The date, place, and time of sampling or measurements;

(2) The dates analyses were performed;

(3) The company or entity performing the analyses;

(4) The analytic techniques or methods used;

(5) The results of such analyses; and

(6) The operating conditions existing at the time of sampling or measurement.

(c) Support information shall include, where applicable:

(1) Copies of all reports required by this permit;

(2) All original strip chart recordings for continuous monitoring instrumentation;

(3) All calibration and maintenance records;

(4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.

(d) All record keeping requirements not already legally required shall be implemented when operation begins.

C.18 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

(a) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

(b) Unless otherwise specified in this permit, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period. The report does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) All instances of deviations must be clearly identified in such reports. A reportable deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:

(1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or

(2) A malfunction as described in 326 IAC 1-6-2; or

(3) Failure to implement elements of the Preventive Maintenance Plan unless lack of maintenance has caused or contributed to a deviation.

(4) Failure to make or record information required by the compliance monitoring provisions of Section D unless such failure exceeds 5% of the required data in any calendar quarter.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred or failure to monitor or record the required compliance monitoring is a deviation.

(d) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.

(e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

C.19 Annual Notification [326 IAC 2-6.1-5(a)(5)]

(a) Annual notification shall be submitted to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.

(b) Noncompliance with any condition must be specifically identified. If there are any permit conditions or requirements for which the source is not in compliance at any time during the year, the Permittee must provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be, achieved. The notification must be signed by an authorized individual.

(c) The annual notice shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in the format attached no later than March 1 of each year to:

Compliance Data Section, Office of Air Quality
Indiana Department of Environmental Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015

(d) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description
(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

(a) One (1) air atomizing paint spray booth, identified as SPPL, with a maximum capacity of spraying twenty-eight (28) small parts per hour, installed October 1996, using water-wash for particulate matter overspray control, and exhausting to stack S4;

(b) One (1) air atomizing paint spray booth, identified as LPPL, with a maximum capacity of spraying three (3) large parts per hour, installed October 1996, using water-wash for particulate matter overspray control, and exhausting to stacks S2 and S3;

Emission Limitations and Standards

D.1.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]

(a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coatings applied to metal parts or products in the air atomizing spray booths (SPPL and LPPL) shall be limited to 3.5 pounds of VOC per gallon of coating less water delivered to the applicator, forced warm air dried coatings.

(b) Solvent used during clean up or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent use is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

D.1.2 Particulate Matter (PM) [326 IAC 6-3-2(c)]

The PM from the two (2) paint booths (SPPL and LPPL) shall not exceed the pound per hour emission rate established as E in the following formula:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and P = process weight rate in tons per hour

D.1.3 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section C - Preventive Maintenance Plan, of this permit, is required for these emission units and any control devices.

Compliance Determination Requirements

D.1.4 Volatile Organic Compounds (VOC)

Compliance with the VOC content limitation contained in Condition D.1.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer.

Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.5 Particulate Matter (PM)

In order to comply with Condition D.1.2, the water-wash for PM control shall be in operation at all times when the two (2) paint booths (SPPL and LPPL) are in operation.

D.1.6 Monitoring

(a) Daily inspections shall be performed to verify that the water level of the water pans meet the manufacturer's recommended level. To monitor the performance of the water pans, the water level of the pans shall be maintained weekly at a level where surface agitation indicates impact of the air flow. Water shall be kept free of solids and floating material that reduces the capture efficiency of the water pan. To monitor the performance of the water-wash, weekly observations shall be made of the overspray from the surface coating booth stacks (S2, S3 and S4) while one or more of the booths are in operation. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

(b) Monthly inspections shall be performed of the coating emissions from the stack and the presence of overspray on the rooftops and the nearby ground. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when a noticeable change in overspray emission, or evidence of overspray emission is observed. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

(c) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.7 Record Keeping Requirements

(a) To document compliance with Condition D.1.1, the Permittee shall maintain records in accordance with (1) through (2) below. Records maintained for (1) through (2) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limit established in Condition D.1.1.

(1) The amount and VOC content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents; and

(2) The VOC content of the coatings used for each month.

(b) To document compliance with Condition D.1.6, the Permittee shall maintain a log of weekly overspray observations, weekly observations of the water level in the pans, daily and monthly inspections, and those additional inspections prescribed by the Preventive Maintenance Plan.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description
(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

One (1) Pangborn shot blast machine with a blast rate of 1,600 pounds steel shot per hour, installed October 1996, equipped with a baghouse for particulate matter control, and exhausting to stack S9;

Emission Limitations and Standards

D.2.1 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the Pangborn shot blast machine shall not exceed 3.53 pounds per hour when operating at a process weight rate of 0.8 tons per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Compliance Determination Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.2.2 Particulate Matter (PM)

In order to comply with Condition D.2.1, the baghouse for PM control shall be in operation at all times when the shot blaster is in operation.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

Company Name:	**Crown Equipment Corporation**
Address:	**2600 East State Road 240**
City:	**Greencastle, IN 46135**
Phone #:	**765-653-4240**
MSOP #:	**133-14606-00031**

I hereby certify that Crown Equipment Corporation is
9 still in operation.
9 no longer in operation.

I hereby certify that Crown Equipment Corporation is
9 in compliance with the requirements of MSOP 133-14606-00031
9 not in compliance with the requirements of MSOP 133-14606-00031

Authorized Individual (typed):
Title:
Signature:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

MALFUNCTION REPORT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
FAX NUMBER - 317 233-5967

This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?_____, 25 TONS/YEAR SULFUR DIOXIDE ?_____, 25 TONS/YEAR NITROGEN OXIDES?_____, 25 TONS/YEAR VOC ?_____, 25 TONS/YEAR HYDROGEN SULFIDE ?_____, 25 TONS/YEAR TOTAL REDUCED SULFUR ?_____, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?_____, 25 TONS/YEAR FLUORIDES ?_____, 100TONS/YEAR CARBON MONOXIDE ?_____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?_____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?_____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?_____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?_____. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____
THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS LISTED ON REVERSE SIDE ? Y N
THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY: Crown Equipment Corporation PHONE NO.: 765-653-4240
LOCATION: 2600 East State Road 240
Greencastle, Indiana 46135
PERMIT NO. MSOP 133-14606-00031 AFS PLANT ID: 133-00031 AFS POINT ID:_____
INSP: Marc Goldman
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON:_____
_____

DATE/TIME MALFUNCTION STARTED: _____/_____/ ____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE_____/_____/ 19____ _____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER:_____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

_____

MEASURES TAKEN TO MINIMIZE EMISSIONS:_____

_____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES:_____
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS:_____
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT:_____
INTERIM CONTROL MEASURES: (IF APPLICABLE)_____
_____
_____

MALFUNCTION REPORTED BY:_____TITLE:_____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY:_____DATE:_____TIME:_____

*SEE PAGE 2

Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

326 IAC 1-6-1 Applicability of rule

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

_____

_____

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the
Technical Support Document for a Minor Source Operating Permit (MSOP)

Source Name:	Crown Equipment Corporation
Source Location:	2600 East State Road 240, Greencastle, Indiana 46135
County:	Putnam
Construction Permit No.:	MSOP 133-14606-00031
SIC Code:	3735
Permit Reviewer:	Linda Quigley/EVP

On October 30, 2001, the Office of Air Quality (OAQ) had a notice published in the Banner Graphic, Greencastle, Indiana, stating that Crown Equipment Corporation had applied for a Minor Source Operating Permit renewal to operate a truck parts manufacturing plant. The notice also stated that OAQ proposed to issue a permit for this installation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On November 28, 2001, Crown Equipment Corporation submitted comments on the proposed operating permit. The summary of the comments and corresponding responses is as follows:

Comment #1

Condition D.1.6 - This condition requires compliance monitoring activities for overspray emissions (particulate matter) from the two paint booths (SPPL and LPPL), including daily inspections of water levels, weekly observations of overspray, and monthly inspections of rooftops and the surrounding area for the presence of overspray. It is Crown Equipment's understanding that the Indiana Department of Environmental Management (IDEM) has established criteria for the conditions under which compliance monitoring permit conditions are required in operating permits in a guidance document dated May 14, 1996. This document indicates that compliance monitoring provisions are necessary in operating permits for particulate sources when 1) "the unit has a device to control emissions and the allowable emissions exceed ten pounds per hour" or 2) "the unit does not have a control device and has actual emissions exceeding 25 tons per year". Emission units SPPL and LPPL both have allowable particulate matter emissions of less than ten pounds per hour and actual particulate matter emissions of less than 25 tons per year. Because Crown Equipment has allowable and actual emissions below the levels that trigger compliance monitoring provisions under IDEM guidance, Crown Equipment believes that Condition D.1.6 should be deleted in its entirety.

Response #1

Complying with the requirements of 326 IAC 6-3-2 can be especially variable for spray coating booths. The actual substrate being coated and the solids content of the coating being used can affect the process weight rate, the gallons or pounds of solids used, transfer efficiency, or other factors that directly affect actual, allowable, or potential emissions. While permit applications contain representative information regarding these factors, relying on this information as an ongoing demonstration of compliance is difficult if the factors are not themselves enforceable. The OAQ does not believe that it would be generally advisable to include these factors as permit conditions, to make them enforceable or to presume that they are so fixed they define a source=s

potential emissions because either could severely limit a source=s operational flexibility. Properly operating the air pollution controls (in this case, the water pans) that are already in place is generally adequate to demonstrate compliance with 326 IAC 6-3 in lieu of a stack test and also assures compliance with applicable rules limiting fugitive dust, opacity, and (when necessary) Potential to Emit. This comment effects no change to the permit.

Comment #2

Condition D.1.7(b) - This condition requires record keeping to demonstrate compliance with daily, weekly, and monthly observations required under Condition D.1.6. Crown Equipment requests that this portion of Condition D.1.7 be deleted, consistent with its recommendation to delete Condition D.1.6 entirely.

Response #2

See Response #1. This comment effects no change to the permit.

Comment #3

Condition D.2.4 - This condition requires visible emission notations of the shot blaster stack once per shift. As noted in Comment #1 above, Crown Equipment believes that such compliance monitoring requirements are only required on emission units that have controls and allowable emissions of ten pounds per hour or no controls and actual emissions (at maximum capacity) above 25 tons per year. The shot blaster has allowable particulate matter emissions of 3.53 pounds per hour (as specified in Condition D.2.1) and actual particulate matter emissions (after control) of less than 0.1 ton per year (from Appendix A). Based on this, Crown Equipment believes that the compliance monitoring provisions contained in Condition D.2.4 should be deleted.

Response #3

The shot blaster utilizes a baghouse as a control device and allowable emissions are less than 10 lbs/hr, thus visible emission notations is not required. Condition D.2.4 has been deleted from the permit as a result of this comment.

Comment #4

Condition D.2.5 - This condition requires weekly pressure drop checks of the baghouse used in conjunction with the shot blaster. For the reasons outlined in Comment #3 above, Crown Equipment believes that this requirement should be deleted.

Response #4

The shot blaster utilizes a baghouse as a control device and allowable emissions are less than 10 lbs/hr, thus parametric monitoring is not required. Condition D.2.5 has been deleted from the permit as a result of this comment.

Comment #5

Condition D.2.6 - This condition requires quarterly internal inspections of the shot blast baghouse control system. For the reasons outlined in Comment #3 above, Crown Equipment believes that this requirement should be deleted.

Response #5

The shot blaster utilizes a baghouse as a control device and allowable emissions are less than 10 lbs/hr, thus baghouse inspections and broken or failed bag detection are not required. Conditions D.2.6 and D.2.7 have been deleted from the permit as a result of this comment.

Comment #6

Condition D.2.8 - This condition establishes certain record keeping requirements for the shot blaster. Crown equipment believes that record keeping requirements pertaining to Conditions D.2.4, D.2.5, and D.2.6 should be deleted.

Response #6

Since Conditions D.2.4, D.2.5 and D.2.6 have been deleted from the permit, the record keeping requirements of Condition D.2.8 are no longer necessary. Condition D.2.8 has been deleted from the permit as a result of this comment.

Condition D.2.2 (Preventive Maintenance Plan) is also being deleted since all the compliance monitoring requirements have been deleted from the permit.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Minor Source Operating Permit (MSOP)

Source Background and Description

Source Name:	**Crown Equipment Corporation**
Source Location:	**2600 East State Road 240, Greencastle, Indiana 46135**
County:	**Putnam County**
SIC Code:	**3735**
Operation Permit No.:	**133-14606-00031**
Permit Reviewer:	**Linda Quigley/EVP**

The Office of Air Quality (OAQ) has reviewed a renewal application from Crown Equipment Corporation relating to the operation of a truck parts manufacturing plant. Crown Equipment Corporation was issued a Construction Permit (CP 133-5677-00031) on October 21, 1996 that will expire on October 21, 2001.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

(a) One (1) air atomizing paint spray booth, identified as SPPL, with a maximum capacity of spraying twenty-eight (28) small parts per hour, installed October 1996, using water-wash for particulate matter overspray control, and exhausting to stack S4;

(b) One (1) air atomizing paint spray booth, identified as LPPL, with a maximum capacity of spraying three (3) large parts per hour, installed October 1996, using water-wash for particulate matter overspray control, and exhausting to stacks S2 and S3;

(c) One (1) Pangborn shot blast machine with a blast rate of 1,600 pounds steel shot per hour, installed October 1996, equipped with a baghouse for particulate matter control, and exhausting to stack S9;

(d) One (1) natural gas fired phosphate washer rated at 1.5 million British thermal units per hour (MMBtu/hr) and exhausting to stacks S5 and S6;

(e) One (1) natural gas fired dry off oven rated 0.8 MMBtu/hr and exhausting to stack S7;

(f) One (1) natural gas fired cure oven rated at 2.5 MMBtu/hr and exhausting to stack S8;

(g) One (1) natural gas fired air make-up unit rated 3.89 MMBtu/hr and exhausting to stack S10

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

(a) CP 133-5677-00031, issued on October 21, 1996, expires October 21, 2001; and

(b) AA 133-9810-00031, issued on July 10, 1998.

All conditions from previous approvals were incorporated into this permit.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
S2 and S3	Large Parts Spray Booth (LPPL)	38 each	2.83 each	12,500 each	ambient
S4	Small Parts Spray Booth (SPPL)	38	3.5	15,000	ambient
S5 and S6	Phosphate Washer	38 each	1.5 each	2,000 each	150
S7	Dry Off Oven	38	0.5	500	350
S8	Cure Oven	38	0.5	1,000	250
S9	Shot Blast Baghouse	28	1.0	3,500	ambient
S10	Air Make-up Unit	38	3.5	4,500	350

Recommendation

The staff recommends to the Commissioner that the Construction Permit renewal as a Minor Source Operating Permit (MSOP) be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on June 29, 2001.

Emission Calculations

See Appendix A of this document for detailed emissions calculations, pages 1 through 5.

Potential To Emit Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	60.37
PM-10	60.59
SO_2	0.02
VOC	13.17
CO	3.20
NO_x	3.81

HAP's	Potential To Emit (tons/year)
Glycol Ethers	less than 10
Toluene	less than 10
TOTAL	less than 25

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM-10 is greater than 25 tons per year but less than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-6.1.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM is greater than 25 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-6.1.

County Attainment Status

The source is located in Putnam County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Putnam County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Putnam County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	0.68
PM10	0.90
SO_2	0.02
VOC	13.71
CO	3.20
NO_x	3.81

(a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.

(b) These emissions were based on the controlled potential to emit of the source. See Appendix A for emission calculations.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source, including the emissions from this permit MSOP 133-14606-00031, is still not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is less than 100 tons per year,
(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
(c) any combination of HAPs is less than 25 tons/year.

This status is based on all the air approvals issued to the source.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14, 326 IAC 20, 40 CFR Part 61 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is located in Putnam County, which is not a specifically listed county, and the potential to emit any criteria pollutant is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The spray paint booths (SPPL and LPPL) were constructed before the rule applicability date of July 23, 1997 and will each emit less than 10 tons per year of a single HAP or 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 6-3-2 (Process Operations)

(a) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the spray paint booths (SPPL and LPPL) shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The water-wash shall be in operation at all times the spray paint booths are in operation, in order to comply with this limit.

(b) Pursuant to CP 133-5677-00031, issued on October 21, 1996, the particulate matter (PM) from the shot blast operation shall be limited to 3.53 pounds per hour by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

$E = 4.10 * (1600/2000)^{0.67} = 3.53$ lbs/hr

Since the maximum controlled PM emissions from the shot blasting operation are 0.01 lbs/hr (see page 5 of 5, TSD Appendix A), the source will comply with the requirements of 326 IAC 6-3-2.

The baghouse shall be in operation at all times the shot blaster is in operation, in order to comply with this limit.

326 IAC 8-2-9 (Miscellaneous Metal Coating)

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating delivered to the applicator at the spray booths (SPPL and LPPL) shall be limited to 3.5 pounds of VOCs per gallon of coating less water, for forced warm air dried coatings.

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

Based on the MSDS submitted by the source and calculations made, the spray booth is in compliance with this requirement.

Testing Requirements

Testing is not required of this source since the coating material usage and related VOC and volatile organic HAP (VHAP) emissions assume 100% flash-off of VOC and VHAP during coating operations, and the shot-blasting is controlled by baghouse with PM emissions after control well below the allowable PM emission rate.

Conclusion

The operation of this truck parts manufacturing plant shall be subject to the conditions of the attached proposed **Minor Source Operating Permit 133-14606-00031.**

Appendix A: Emission Calculations

Company Name: Crown Equipment Corporation
Address City IN Zip: 2600 East State Road 240, Greencastle, IN 46135
MSOP: 133-14606-00031
Reviewer: Linda Quigley/EVP
Date: October 15, 2001

Uncontrolled Potential Emissions (tons/year)

	Emissions Generating Activity			
Pollutant	Natural Gas Combustion	Surface Coating Booths	Shot Blasting Process	**TOTAL**
PM	0.07	28.80	31.50	60.37
PM10	0.29	28.80	31.50	60.59
SO2	0.02	0.00	0.00	0.02
NOx	3.81	0.00	0.00	3.81
VOC	0.21	13.50	0.00	13.71
CO	3.20	0.00	0.00	3.20
total HAPs	negl.	9.83	0.00	9.83
worst case single HAP	negl.	5.86	0.00	5.86

Total emissions based on rated capacity at 8,760 hours/year.

Controlled Potential Emissions (tons/year)

	Emissions Generating Activity			
Pollutant	Natural Gas Combustion	Surface Coating Booths	Shot Blasting Process	TOTAL
PM	0.07	0.55	0.06	0.68
PM10	0.29	0.55	0.06	0.90
SO2	0.02	0.00	0.00	0.02
NOx	3.81	0.00	0.00	3.81
VOC	0.21	13.50	0.00	13.71
CO	3.20	0.00	0.00	3.20
total HAPs	negl.	9.83	0.00	9.83
worst case single HAP	negl.	5.86	0.00	5.86

Total emissions based on rated capacity at 8,760 hours/year, after control.

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations

Company Name: Crown Equipment Corporation
Address City IN Zip: 2600 East State Road 240, Greencastle, IN 46135
MSOP: 133-14606-00031
Reviewer: Linda Quigley/EVP
Date: October 15, 2001

Material	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Small Parts (SPPL)																
90 Yellow PW 8209 B	8.9	64.92%	52.9%	12.0%	56.6%	26.21%	0.05000	28.000	2.46	1.07	1.49	35.84	6.54	16.25	4.07	15%
88 Dark Grey PW 8116	9.3	59.40%	49.1%	10.3%	54.8%	32.27%	0.05000	28.000	2.12	0.96	1.34	32.25	5.89	19.68	2.97	15%
88 Med Grey PW 8325 A	9.5	57.63%	47.4%	10.2%	54.1%	32.82%	0.05000	28.000	2.11	0.97	1.36	32.62	5.95	20.98	2.96	15%
Red Primer PW 8384	9.6	56.01%	44.9%	11.2%	51.4%	34.21%	0.05000	28.000	2.19	1.07	1.49	35.81	6.54	**21.90**	3.12	15%
94 Beige PW 78331	9.5	59.02%	48.7%	10.4%	55.4%	31.30%	0.05000	28.000	2.21	0.98	1.38	33.03	6.03	20.27	3.14	15%
Orange PW 8326	9.3	63.98%	51.3%	12.7%	57.3%	26.47%	0.05000	28.000	2.76	1.18	**1.65**	**39.63**	**7.23**	17.42	4.46	15%
Lacquer Thinner	6.8	100.00%	0.0%	100.0%	0.0%	0.00%	0.40000	0.100	6.84	6.84	**0.27**	**6.57**	**1.20**	0.00		100%
Large Parts (LPPL)																
90 Yellow PW 8209 B	8.9	64.92%	52.9%	12.0%	56.6%	26.21%	0.25000	3.000	2.46	1.07	0.80	19.20	3.50	5.12	4.07	50%
88 Dark Grey PW 8116	9.3	59.40%	49.1%	10.3%	54.8%	32.27%	0.25000	3.000	2.12	0.96	0.72	17.28	3.15	6.20	2.97	50%
88 Med Grey PW 8325 A	9.5	57.63%	47.4%	10.2%	54.1%	32.82%	0.25000	3.000	2.11	0.97	0.73	17.48	3.19	6.61	2.96	50%
Red Primer PW 8384	9.6	56.01%	44.9%	11.2%	51.4%	34.21%	0.25000	3.000	2.19	1.07	0.80	19.18	3.50	**6.90**	3.12	50%
94 Beige PW 78331	9.5	59.02%	48.7%	10.4%	55.4%	31.30%	0.25000	3.000	2.21	0.98	0.74	17.70	3.23	6.39	3.14	50%
Orange PW 8326	9.3	63.98%	51.3%	12.7%	57.3%	26.47%	0.25000	3.000	2.76	1.18	**0.88**	**21.23**	**3.87**	5.49	4.46	50%
Lacquer Thinner	6.8	100.00%	0.0%	100.0%	0.0%	0.00%	0.40000	0.100	6.84	6.84	**0.27**	**6.57**	**1.20**	0.00		100%
Uncontrolled Potential Emissions											**3.08**	**73.99**	**13.50**	**28.80**		

Controlled Potential Emissions

Control Efficiency:		Controlled	Controlled	Controlled	Controlled
VOC	PM	VOC lbs/hr	VOC lbs/day	VOC tons/yr	PM tons/yr
0.00	98.1%	**3.08**	**73.99**	**13.50**	**0.55**

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
The surface coating material usages for each booth are mutually exclusive.

Appendix A: Emission Calculations
HAP Emission Calculations

Company Name: Crown Equipment Corporation
Address City IN Zip: 2600 East State Road 240, Greencastle, IN 46135
MSOP: 133-14606-00031
Reviewer: Linda Quigley/EVP
Date: October 15, 2001

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Toluene	Weight % Glycol Ethers	Toluene Emissions (ton/yr)	Glycol Ethers Emissions (ton/yr)	All Toxics (ton/yr)
Small Parts (SPPL)								
90 Yellow PW 8209 B	8.89	0.050000	28.00	0.00%	9.00%	0.00	4.91	4.91
88 Dark Grey PW 8116	9.30	0.050000	28.00	0.00%	9.00%	0.00	5.13	5.13
88 Med Grey PW 8325 A	9.50	0.050000	28.00	0.00%	9.00%	0.00	5.24	5.24
Red Primer PW 8384	9.55	0.050000	28.00	0.00%	10.00%	0.00	**5.86**	5.86
94 Beige PW 78331	9.49	0.050000	28.00	0.00%	9.00%	0.00	5.24	5.24
Orange PW 8326	9.28	0.050000	28.00	0.00%	8.00%	0.00	4.55	4.55
Lacquer Thinner	6.84	0.400000	0.10	35.00%	0.00%	**0.42**	0.00	0.42
Large Parts (LPPL)								
90 Yellow PW 8209 B	8.89	0.250000	3.00	0.00%	9.00%	0.00	2.63	2.63
88 Dark Grey PW 8116	9.30	0.250000	3.00	0.00%	9.00%	0.00	2.75	2.75
88 Med Grey PW 8325 A	9.50	0.250000	3.00	0.00%	9.00%	0.00	2.81	2.81
Red Primer PW 8384	9.55	0.250000	3.00	0.00%	10.00%	0.00	**3.14**	3.14
94 Beige PW 78331	9.49	0.250000	3.00	0.00%	9.00%	0.00	2.81	2.81
Orange PW 8326	9.28	0.250000	3.00	0.00%	8.00%	0.00	2.44	2.44
Lacquer Thinner	6.84	0.400000	0.10	35.00%	0.00%	**0.42**	0.00	0.42
						0.84	**8.99**	**9.83**

HAPS emission rate (tons/yr) = Density (lb/gal) * Gal of Material (gal/unit) * Maximum (unit/hr) * Weight % HAP * 8760 hrs/yr * 1 ton/2000 lbs

The surface coating material usages for each booth are mutually exclusive.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: Crown Equipment Corporation
Address City IN Zip: 2600 East State Road 240, Greencastle, IN 46135
MSOP: 133-14606-00031
Reviewer: Linda Quigley/EVP
Date: October 15, 2001

Heat Input Capacity MMBtu/hr		Potential Throughput MMCF/yr
1.5	phosphate washer	13.1
0.8	dry off oven	7.0
2.5	cure oven	21.9
3.9	air make up unit	34.1
8.7		**76.1**

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.07	0.29	0.02	3.81	0.21	3.20

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emissions Calculations

Company Name: Crown Equipment Corporation
Address City IN Zip: 2600 East State Road 240, Greencastle, IN 46135
MSOP: 133-14606-00031
Reviewer: Linda Quigley/EVP
Date: October 15, 2001

The following calculations determine emissions from the shot blasting process based on 8760 hours and applicant specified information pertaining to each PM/PM10 control device. PM10 is assumed to equal PM.

Baghouse (BH-1): Shot Blasting

PM/PM10:	0.24	gr/dscf x	3500	scfm x	60	min/hr /	lb/7000 grain =
uncontrolled	7.2	lb/hr x	(1 ton/2000 lb)	x	8760	hr/yr =	**31.5 tons/yr**

where the baghouse control efficiency is listed ≥99.80%

PM/PM10:	0.24	gr/dscf x	3500	scfm x	60	min/hr /	lb/7000 grain x
controlled	(1 - 99.8%)	=	0.144	lb/hr x	(1 ton/2000 lb)	x	8760 hr/yr = **0.063 tons/yr**